

LIFE SUPPORT CONFERENCE

James Forrestal Building, Washington, DC

19-20 March 1974

25X1

Invited Personnel:

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Discussion Items

0900

19 March 1974

1. Opening Remarks and Minutes of Last Meeting.
2. ASD/SML Pressure Suit Activities.
3. Automatic Seat-Kit Status.
4. S-1010 Prototype Helmet Report.
5. S-100 Suit Development Status.
6. Visored Dome Assembly.
7. Tube Food Developments.
8. Maintenance Vans

Lunch

1200 - 1300

25X1

9. Discussion of Proposed Recommendations/Modifications. (6 Feb 74)

On file USAF release
instructions apply.

20 March 1974

0900

1. Continuation of Discussion of Recommendations/Modifications.
2. Next Generation of Suits.
3. New Business.
 - a. "Typro" Fabrics.
 - b. Tech. Rep. "Crosstalk."
4. Review/Action Items.
5. Next Meeting Plans.

DEPARTMENT OF THE AIR FORCE

Approved For Release 2003/02/27 : CIA-RDP75B00285R000100200001-8



REPLY TO
ATTN OF: SGPAT

6 FFB 1074

SUBJECT: Proposed Modification/Development U-2, SR-71, Life Support Equipment

TO: HQ USAF/SGPA

1. The following is a list of proposed recommendations for modification and development of U-2 and SR-71 Life Support equipment:

a. SR-71

- U (1) Enlarge the size openings to glove and suit rings.
- (2) Permanently install the integrated thermal protective unit.
- (3) Independent operation of sunshade and clear visor to permit the use of the sunshade without oxygen during low-level flight.
- (4) Replace sunshade with a graduated tinted intensity helmet visor, dark on top, light on bottom, for sun protection and maximum cockpit visibility.
- U (5) Larger food port in helmet to accept tube food. The present feeding port is small and can only be used for liquid feeding.
- (6) Place the UCD plunger in a more accessible position closer to the crotch area.
- (7) Increase mobility of the inflated pressure suit during the pre-ejection position to make it easier to reach the D-ring.
- * (8) Six line cut, to reduce oscillation and improve chute stability.
- (9) Improve the male-female connection on the internal hose of the urinal assembly. Prefer a bayonet type connection over the C-ring connection.
- (10) Reduce the bulk of the S901J pressure suit boot.

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b. U-2

* (1) Improve the S-100 helmet take-up assembly similar to the S-1010 helmet.

* (2) Improve the S-100 helmet liner to fit better around the ears with a repositionable ear cup.

* (3) Independent operating sunshade for the S-100 helmet to permit use during low altitude flight not requiring oxygen.

* (4) Reduce S-100 helmet weight, perhaps by adding a counterbalance spring.

* (5) Install a quick change face barrier in the S-100 helmet similar to the one used in the S-1010 helmet, or redesign it to make it easier to maintain.

(6) Improve ventilation garment to reduce back pressure and provide increased ventilation. (S-100 suit)

(7) Improve the quick disconnect between the suit and seat kit for ground egress purposes. Present system does not work as designed under actual conditions ("R" article-1, page 3-4, Fig 3-1, item 4).

(8) Improved S1010 UCD system to handle increased flow rate and capacity.

(9) Modify the S1010 UCD to prevent stricture by the integrated parachute harness.

(10) Improve reliability of the S1010 entry closure to reduce excessive failure rate.

(11) Improve the S1010 glove ventilation for increased flow.

* (12) Reduce S1010 suit weight by integrating the bladder with the restraint layer, include a lightweight hardware, reduce bulk, cut easements to a minimum and improve the parachute harness.

(13) Automatic oxygen shut-off when the S1010 helmet visor is up, similar to S-100 or S-901J helmet to eliminate manual control.

U (14) Improved inflight feeding capability; redesign the inflight feeding port to make it easier to maintain.

(15) Battery pack to heat visor during high altitude ejection in "C" articles.

(16) Mechanical massaging seat cushion to improve circulation and reduce fatigue. ("R" and "C" articles)

(17) Provision for heating and/or maintaining liquid food (soup and hot drinks). ("R" and "C" articles)

4 (18) Provide an easier or more practical method of utilizing stick foods. The present tube stick gun is too heavy and bulky to be easily utilized during flight.

? (19) Install a small cassette music system to reduce fatigue and eliminate boredom during long duration, low activity flights.

2 (20) Install the six line cut on the LAR0225-3 parachute to reduce oscillation, improve chute stability, and provide some directional control.

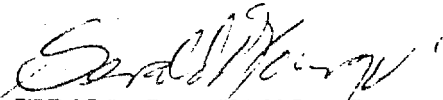
(21) Individually fitted lumbar pads to ease back tension and muscle strain during long duration flights.

(22) Improve the male-female connection on the internal hose of the S1010 urinal assembly. Prefer a bayonet type connection over the C-ring connection.

(23) Reduce the bulk of the S1010 pressure suit boot.

2. Attachments 1 and 2 include a list of equipment used in the U-2/SR-71 program.

- FOR THE COMMANDER IN CHIEF


GERALD D. YOUNG, Jr., Colonel, USAF, MC
Chief, Aerospace Medicine Division
Office of the Surgeon

2 Atchs
1. Life Support
Equipment, 9 SRW,
Beale AFB CA
2. Life Support
Equipment, 100 SRW,
Davis-Monthan AFB AZ

LIFE SUPPORT EQUIPMENT, 9 SRW, BEALE AFB CA

Coverall, full pressure	GNA 2345
Coverall, exterior	GN 12270G-10CA
Boots	GN ACS-DS16
Gloves	GN 12317G-01CA/Left AA
Gloves	GN 12317G-02CA/Right AA
Controller	DN 53500-3
Controller, vent	4AQ399-4
Vent Garment	GN 121056-03
UCD	GN 16242G-03
Spurs	4AQ1205
Underwear	GNP8026-40
Socks	GNP1917-1)
Vent Hose	4AQ399-3
Survival Mittens (suit)	GN 16874C-02AB00
Helmet (standard)	GNA2282
Helmet (extra large)	GN12139G-01
Helmet Regulator	DN53600-1
Parachute	4AQ1670-8-9-500 and 502
Survival Kit	4AQ411-101
Cushion	4AQ327-3
Raft	GN 16957G-02
Bag, water	8465-634-4499
*Desalter Kit	4220-216-5031
*First Aid Kit	6545-782-6412
*Light Marker SDU 5/P	6230-067-5209
*Radio ACRRT-10	5821-912-4480
*Flares, MK-13 Mod 0	1370-309-5028L275
*Compass, magnetic	6605-84L-7618
*Water, drinking, canned	8960-243-2103
Tourniquet	6515-383-0565
*Whistle	8465-254-8803
*Mirror, emergency	6350-105-1252
*Repair Kit, Plug, Life Raft	2090-693-1471
*Kit, signal, personnel distress	1370-490-7362
*Matches, box	8465-265-4925
*Sea Marker	6850-270-9986
Can Opener	Local Purchase
Socks	8440-153-6717
Knife, 5-inch	7340-292-9138
Communications, cord	AR-809

*Standard items used by 9 SRW, Beale AFB and 100 SRW, Davis-Monthan AFB.

LIFE SUPPORT EQUIPMENT, 100 SRW, DAVIS-MONTHAN AFB

Space Blanket	7210-935-6667
AN/URC-64	5821-582-1910YC
Raft (LRU-6/P)	4220-869-2738LS
Regulator O ₂ Low Flight	DN2320-15
Regulator O ₂ S1010	DN53600-1
UCD	GN 16177G01
Socks	GN 9356 P07CADY0
Drawyors	GN 12431G02CAJGO
Shirt	GN 16388G01CAKLO
Cushion	LA 809300-3
Parachute	LA RQ 225-3
Parachute (Standard)	1670 801 1670
Survival Kit	DN -PM59300-2A
Survival Kit (C-Model)	SP - Q198
Helmet (Full)	GN - 10786G01
Coverall (Full)	GN - 16120G01ALZZO
Coverall (Partial)	GN - 16129G-03ZZBW0 (High Visibilit
Coverall (Partial)	GN - 16130G-03ALAZO (Sage Green)
Spurs	LA -4AQ1205
Controller	DN -53500-2
Comm Cord (Low Flight)	LA -RR502-3
Comm Cord (High Flight)	LA -RR502-5
Vent Hose -(Aircraft)	LA -PM20867-1
Boots, Combat Crew, Insulated,	
Gloves	DN-16613G-02ALZZ (Left & Right)
Bladder ASSY	GN -16131G-0ZAL
Case Assy	GN -12459G-0ZAL
Bladder & Case Assy	GN -16131G-0ZAL
Helmet - 6 Modified	GN -16165G-03
Coveralls, MC-3A	8475 - 5592430
Coveralls -PPS (MC-3AModified)	GN-12745G-01AH
Gloves S-647D	8415-N1-25305
Face Piece	SP-Q240-502